Partner referral as a component of integrated sexually transmitted disease services in two Rwandan towns

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Objective: To document partner referral rates at health centres with improved STD services, and to determine factors contributing to successful referral.
Methods: Partner referral was initiated as part of the upgrading of STD services in primary care health facilities in two semi-urban Rwanda towns. After syndromic management of the presenting complaint, index patients received prevention education and condom demonstration, and were urged to refer sexual partners to the health centre for a free examination. Partner referral coupons linked by code number to the symptomatic index patient were given to facilitatate referral; no identifying information was collected on partners from the index patients.
Results: Three quarters of the symptomatic patients seen at the two primary health care facilities were women. Overall, the ratio of referred partners to index patients was 26%. Only 58% of index patients accepted partner referral coupons. The referral rate for those who did accept coupons was 45%. Partner referral worked best for regular partners. Most index patients and partners were married and only four index patients referred more than one partner. Women index patients, especially when pregnant, were more successful in referring partners than men. Index patients who referred partners tended to be older than those who did not. Awareness of STD symptoms in the partner, and diagnosis of cervicitis were associated with a higher rate of partner referral.
Conclusions: Efforts to improve rates of partner referral should begin at the clinic level with improved counselling to convince more index patients of the importance of partner referral. Partner symptom recognition may be useful for increasing rates of partner referral. Supplementary strategies are needed to reach non-regular partners. When syndromic management is used, counselling should take into account the lower predictive values of identifying STD in women in order to avoid partner accusation. Despite limitations, patient referral of sexual partners can be an effective strategy for reaching a population at high risk for STD with minimal additional investment in health worker staff time.
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Keywords: STD; Rwanda; partner referral

Introduction

Partner referral or notification, and treatment, is an essential component of STD control programmes,[1] and one of the few means of identifying individuals with asymptomatic infection who might otherwise remain untreated and infectious. Several strategies have been described[2 3] involving notification of exposed partners by health workers or public health outreach workers (provider referral), or by the index patients themselves (patient referral). Of these approaches, patient referral may be the most feasible for Africa and other regions where public health infrastructures and resources are severely limited.

Winfield and Latif[4] in Zimbabwe reported 19% partner referral with use of a referral card; this was increased to over 42% when outreach workers attempted to track partners who did not present to the clinic on their own. In Nigeria,[5-6] reminder notices mailed to partners yielded little improvement in partner referral. In both cases, identifying information (name, address) on the contact was requested from the index patient. In later attempts to trace partners who did not present spontaneously, many were not traceable to the given address.

In Haiti, Desormeaux *et al*[7] reported that 384 antenatal women treated for STD named 331 partners, though only 30% of these presented to the clinic for treatment; an additional 38 (11%) were treated as a result of referral from a community health worker. Jenniskens and Obwaka,[8] working with antenatal women in Nairobi, found that with adequate counselling about congenital syphilis, 86% of women accepted partner referral coupons, and 48% of partners came for treatment

The above studies describe experience with partner referral from STD clinics where the majority of patients are men, or from antenatal screening programmes where the target population is largely asymptomatic. To our knowledge, little work on partner referral with symptomatic women and men presenting to primary care health centres has been described.

In Rwanda, a pilot project was set up in one health facility in each of two semi-urban towns, communities with recognised though undocumented high prevalence of STD and estimated 10–12% HIV seroprevalence.[9] The objective of the pilots was to assess the feasibility of upgrading STD services, and to assist

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the Rwandan Ministry of Health in developing guidelines for STD management.

The health facilities chosen included a primary care health centre with maternal and child health/family planning (MCH/FP) services, and a busy outpatient dispensary of a prefectoral hospital. STD management at baseline was found to be anarchic with health workers following several different approaches. Typically, a person with an STD made several visits to the health facility over a day or two, passing from triage to health worker to the laboratory and back to the health worker. Laboratory results guided management and represented the major time consuming step in the long circuit a patient followed. Little time was left for risk reduction counselling or condom promotion, and no systematic effort was made to treat sexual contacts.

Methods

After modifying WHO syndromic algorithms for Rwanda, flowcharts were produced for training and for posting in examination rooms. Health workers (12 nurses) received a three-day training including utilisation of the algorithms, review of history taking and physical examination, prevention education, condom promotion, partner referral, record keeping and drug management.

All symptomatic patients presenting to the health facilities between September, 1993 and March, 1994 were managed by algorithm, received education on completing the course of treatment and were advised to return for a follow-up visit a week later. Condom use was demonstrated, samples provided, and a partner referral slip linked by code to the index patient was given to the patient along with advice on the importance of partner treatment.

The only information about partners that appeared on the referral slip was the index patient's identification number and a code indicating the STD syndrome for which the index patient was treated. No identifying information on contacts was requested from the index patients. All partners presenting with referral coupons were examined and treated epidemiologically, based on the syndrome diagnosed in the index case. Any symptoms in a partner would be managed as in a new index case. Clinic fees were waived for partners on the assumption that they would be reluctant to pay for a clinic visit if they were asymptomatic; national policy required, however, that partners, as well as index patients, pay for any medication dispensed.

To monitor health worker performance, a form was developed to record each patient's symptoms and signs, and to indicate the syndrome diagnosed and management prescribed. Information on follow-up visits and partner referral was also collected and linked to the initial visit of the index patient. Weekly supervisory visits were made to the health facilities to monitor and encourage the nurses and to assure quality care and record keeping.

Results

Index Case Demographics Of the 427 index patients seen with genitourinary complaints at the two health facilities, 325 (76%) were women and 102 (24%) men. The mean age for women was 27·4 years (median 26), for men 30·1 (median 27). Thirty-one percent of women said they were pregnant. Eighty-three percent of patients first presented to the outpatient department where they indicated an STD symptom as the reason for the visit. Others were referred from antenatal or family planning clinics, or from social workers who ran a risk reduction service for single women. Thirty-five percent of patients had symptoms for a week or less, 50% two weeks or less and 70% one month or less. Seventeen percent reported having symptoms for more than 3 months.

Index STD Risk Only 8·5% of patients admitted to having more than one sexual partner. Ten percent of women and 9% of men said they were aware of symptoms of STD in their partner. Forty percent of women and 14% of men said their partner had no symptoms. The rest did not know. Seventy-three percent of symptomatic patients had never used a condom. Only 3% had used one in the last week.

Partner referral A total of 110 sexual partners were referred to the clinic by index patients. Overall, the ratio of partners to index patients was 26%. Only 248 (58%) index patients, however, accepted the partner referral coupons offered by the health worker. Thus, the ratio of partners treated to index patients accepting referral cards was 45%. While half the partners came in for treatment within eight days of the referring index patient, delay in seeking care varied considerably, from 0 to 123 days. Clinic attendance and partner referral trends are presented in fig 1. There was no significant difference in attendance or referral rates between the two facilities.

Among the referred partners, 89 (81%) were men and 21 (19%) women. Women were somewhat more likely to refer partners for treatment than men. Pregnant women were more likely to accept referral cards (72% vs. 56%) and to refer partners (33% vs. 20%) than women who said they were not pregnant. Partners and the index patients who referred

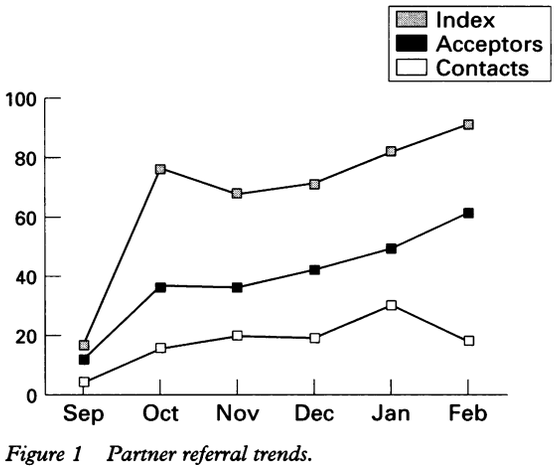

Figure 1 Partner referral trends.

Table 1 Mean ages of index patients and contacts

	Women	*Men*
All index patients	27	30
Index patients who accepted coupons	28	31
Index patients who referred contacts	29	35
Contacts	30	35

them tended to be older, especially among male index patients (table 2).

Type of partner Only five index patients accepted more than one referral card, four of whom referred more than one partner for treatment. Two women referred two men each and two other women each referred one male and one female. Only one of 14 men who admitted to having two or more partners accepted more than one referral coupon.

Married index patients referred 86 married and 5 single partners. Single, divorced or widowed index patients referred 6 single and 9 married partners. Seven male partners, three single and four married, were referred from index patients who came from the social service programme for single women at risk.

Symptoms in partners Forty-two partners had symptoms, 16 of 21 (76%) women and 26 of 89 (29%) men. Of 15 partners referred by male index patients with urethritis, 80% had symptoms. Of index patients with genital ulcer, cervicitis and PID, 52%, 33% and 30% of partners respectively were symptomatic.

Only 10% of index patients were aware of STD symptoms in a partner. However, 90% of index patients with symptomatic partners accepted referral coupons and 21% of all treated partners were referred from such index patients.

Second generation referral Partners themselves were not effectively advised on partner referral. Only 15 (14%) of the 110 partners accepted referral coupons for their other contacts. Twenty-one percent of symptomatic partners accepted referral coupons. Women again were more likely to accept referral coupons, 31% of those with symptoms and 24% overall accepting. Only 15% of symptomatic male contacts and 11% of all male partners accepted referral coupons.

Discussion

Partner referral by STD patients themselves (patient referral) can be an effective strategy for identification and treatment of those at very high risk of STD, many of whom would not otherwise seek care. Use of a referral coupon linked to the index patient can facilitate referral and help track success of the effort.

Many of the previously reported experiences with patient referral have come from STD clinics or STD services in health facilities where the majority of symptomatic patients seeking care were men. A common assumption from these experiences is that patient referral has the most potential as a method of identifying a subset of the regular female partners of men with STDs.

Our experience was different in several respects. First, we worked in two primary health care facilities where no effort was made to advertise STD services. Three quarters of the patients seen with genitourinary complaints were women, most of whom had clinical and/or laboratory signs of cervical inflammation. Women were more likely than men to accept partner referral coupons, and those who did accept were more likely to refer partners than their symptomatic male counterparts. On the other hand, our experience supports anecdotal evidence that the majority of partners referred by index patients are regular partners. Patient referral does not seem to be very effective at identifying casual contacts.

Several possible areas were identified for improving partner referral. Among these are improved counselling of index patients, removal of cost barriers to the treatment of partners, and complementary strategies for identifying non-regular sexual contacts. Educational messages at the community level emphasising partner symptom recognition and the importance of partner treatment might also improve partner referral rates. Better strategies are clearly needed to convince youth and males, who in our experience were less likely to seek care for STD or to refer contacts, of the importance of both.

In our experience, more "missed opportunities" for partner referral could be traced to the health worker-patient interaction than to the patient-contact level. Improved efforts to encourage more index patients to take an active role in referring partners might be more productive than utilising health workers to trace contacts in the community. In the Central African Republic (Steen, unpublished observation), of 3100 index patients seen over more than a year at an STD service integrated into outpatient services at a regional hospital, health care workers were more successful at convincing patients to accept referral coupons (71% acceptance), and the overall rate of partner referral was higher (38%) than in our experience in Rwanda. This may have been due to increased emphasis on partner referral counselling, to longer duration of the project, or to cultural factors. In a an STD clinic in Great Britain,[10] improved rates of partner referral were noted after index patients received in-depth counselling on the importance of this aspect of STD control.

Educational messages that emphasise partner symptom recognition have been suggested as a method of improving STD care-seeking behaviour in women, especially among those who are asymptomatic. Partner symptom recognition, in raising awareness of risk, may also improve rates of partner referral. In our experience, awareness of symptoms in a partner

Table 2 Partner Referral Rates by Syndome Diagnosis

	Index	*Acceptors*	*Accept/index*	*Contacts*	*Contact/accept*	*Contact/index*
Syndrome						
Cervicitis	186	127	68%	63	50%	34%
PID	53	32	60%	10	31%	19%
Genital ulcer	78	46	59%	21	46%	27%
Urethritis	73	42	58%	15	36%	21%

was associated with a greatly increased likelihood of accepting partner referral coupons, and with a two-fold higher rate of successful partner referral.

When partners are referred, they are, with few exceptions, the regular partners of the index case. While partner referral as described here can successfully reach a majority of regular partners, other strategies are needed for reaching casual partners. Most index patients in our experience were reluctant even to admit to having more than one sexual partner. None of the men seen, even those who admitted having multiple partners, referred more than one sexual partner for treatment. Results were equally poor if we looked at the male partners referred by female index cases; even those who were symptomatic were reluctant to accept referral coupons for other partners. If most treated contacts represent regular partners, it is unlikely that many source contacts were being treated.

A supplementary strategy for identifying the more epidemiologically important casual partners might include asking index patients to specify the locations where they think they might have contracted the STD. Outreach efforts guided by cluster interviewing could then focus on these areas to promote preventive measures, increase health seeking behaviour and, in some identified "core" populations, provide screening and/or presumptive treatment.

Finally, in implementing STD services in primary care settings where a large number of women come for care, and where diagnostic facilities are limited, some difficulties in partner referral became apparent. Given the poor predictive values of currently available methods of identifying STD in women, counselling of both syndromically managed patients and their partners must include some acknowledgement of the uncertainty both of the diagnosis, and of the assumption that the condition was sexually acquired. A woman with vaginitis, who is presumptively treated for gonorrhoea and chlamydia based on risk assessment or clinical signs, may very likely have nothing more serious than an overgrowth of *Candida albicans*. It would be a disservice to her, and to her partner, to label her as having an STD. Counselling could emphasise the importance of treating "reproductive tract infections" in preserving health and fertility. Experience from antenatal syphilis screening programmes[7 8] indicates that couples are more accepting of and compliant with partner treatment recommendations when they are framed in the context of reproductive health.

Conclusions

Patient referral of sexual partners for treatment can contribute to reducing the community burden of STD with minimal additional investment in health worker staff time. From 20 to 50% more individuals[4-8] with a high likelihood of having an STD can be treated than would be if one relied only on treating symptomatic patients presenting to health facilities. The higher rates will be more likely if index patients are adequately counselled about partner referral, if cost barriers to partner treatment are removed, and if community educational messages stress the importance of partner treatment in breaking the chain of sexually transmitted infections.

It is important, however, to recognise the limitations of relying on patients to refer their sexual partners. If most of those referred for treatment are the regular partners of index patients, patient referral would not be an effective method of reaching an important "core group", the casual contacts who are much more instrumental in maintaining the chain of STD infection in the community than regular partners.

Finally, it is essential to refine strategies for reaching sexual partners, many of which were developed for vertical STD programmes targeting men, to meet the needs of women. STD services integrated into primary care clinics or MCH/FP services where women go for care must take into account the much lower predictive values of currently available methods for identifying STD in women, and develop innovative counselling approaches that permit treatment of high risk individuals and their partners while avoiding stigmatisation and partner accusation.

1 World Health Organization [WHO]. Study Group on Management of Sexually Transmitted Disease Patients. Management of patients with sexually transmitted diseases. World Health Organization Technical Report Series. 1991;810:i-vii, 1–103.

2 Potterat BA, Meheus A, Gallwey J. Partner notification: operational considerations. *Int J STD AIDS* 1991;2: 411–5

3 Strategies for Management of Sex Partners. In: *Sexually Transmitted Diseases.* Holmes KK, Mardh P-A, Sparling PF, Wiesner PJ eds. 2nd edn. New York: Mcgraw-Hill, 1990, pp 1081–6

4 Winfield J, Latif, AS. Tracing contacts of persons with sexually transmitted diseases in a developing country. *Sex Transm Dis* 1985;12:5–7

5 Asuzu MC, Ogubanjo BO, Ajayi IO, Oyediran ABO, Osoba AO. Contact tracing in the control of STD in Ibadan, Nigeria. *Br J Venereal Dis* 1984;60:114–6

6 Asuzu MC, Rotowa NA, Ajayi IO. The use of mail reminders in STD contact tracing in Ibadan, Nigeria. *East African Medical Journal.* 1990;67:75–8.

7 Desormeaux J, Behets F, Adrien A, *et al.* Introduction of partner referral and treatment for control of sexually transmitted diseases in a poor haitian community. Tenth International Conference on AIDS, Yokohama, Japan. Abstract Book, Volume II.

8 Jenniskens F, Obwaka E. *Syphilis Control in Pregnant Women: Clinic-based Screening, Treatment and Counseling Services in Nairobi, Kenya.* The MotherCare Project. Working paper: 20. 1994

9 MINISANTE/Rwanda. HIV sentinel surveillance data.

10 Capinski TZ; Urbanczyk J. Value of re-interviewing in contact tracing (Venereal disease) *Br J Venereal Dis* 1970; 46:138–40.